

LISTING OF CLAIMS

We claim:

1. (currently amended) An apparatus comprising:

descriptor logic on a tangible computer readable medium, said apparatus comprising hardware for controlling flow of data between first and second data processing systems via a memory, said descriptor logic for generating a plurality of descriptors including a frame descriptor defining a data packet to be communicated between a location in the memory and the second data processing system,

a pointer descriptor identifying the location in the memory; and

a descriptor table for storing on the computer readable medium, the plurality of descriptors generated by the descriptor logic for access by the first and second data processing systems,

wherein said apparatus employs Logical Communication Port architecture;

wherein said Logical Communication Port architecture comprises LCP Clients, an LCP Manager resident in the kernel space, and at least one LCP Context resident in an adapter; and

wherein an LCP client can be located in one of user application space and the kernel.

2. (currently amended) An apparatus as claimed in claim 1, wherein ~~said apparatus employs Logical Communication Port architecture,~~ and the descriptor table is stored in one of the first data processing system and the second data processing system.

3. (original) An apparatus as claimed in claim 1, wherein the descriptor table is stored in the second data processing system.

1 4. (currently amended) An apparatus as claimed in claim 1, wherein ~~said apparatus employs~~
2 ~~Logical Communication Port architecture, and~~ the descriptor logic generates a branch descriptor
3 comprising a link to another descriptor in the descriptor table.

4 5. (original) An apparatus as claimed in claim 4, wherein the descriptor table comprises a plurality
5 of descriptor lists sequentially linked together via branch descriptors therein.

6 6. (original) An apparatus as claimed in claim 4, wherein the descriptor table comprises a cyclic
7 descriptor list.

8 7. (currently amended) An apparatus as claimed in claim 1, wherein ~~said apparatus employs~~
9 ~~Logical Communication Port architecture, and~~ the first data processing system comprises a host
10 computer system.

11 8. (original) An apparatus as claimed in claim 1, wherein the second data processing system
12 comprises a data communications interface for communicating data between the host computer
13 system and a data communications network.

14 9. (currently amended) A data processor comprising:

15 a host computer system having a memory, a data communications interface for communicating
16 data between the host computer system and a data communications network, and apparatus
17 comprising:

18 descriptor logic on a computer readable medium, said apparatus for controlling flow of data
19 between first and second data processing systems via a memory, said descriptor logic for
20 generating a plurality of descriptors including a frame descriptor defining a data packet to be
21 communicated between a location in the memory and the second data processing system, and

- 1 a pointer descriptor identifying the location in the memory; and
- 2 a descriptor table for storing on the computer readable medium, the plurality of descriptors
- 3 generated by the descriptor logic for access by the first and second data processing systems, for
- 4 controlling flow of data between the memory of the host computer system and the data
- 5 communications interface, and wherein said data processor employs Logical Communication Port
- 6 architecture; wherein said Logical Communication Port architecture comprises LCP Clients, an
- 7 LCP Manager resident in the kernel space, and at least one LCP Context resident in an adapter;
- 8 and wherein an LCP client can be located in one of user application space and the kernel.
- 9 10. (currently amended) A method comprising controlling flow of data between first and second
- 10 data processing systems via a memory, the step of controlling comprising:
- 11 by descriptor logic, generating a plurality of descriptors including a frame descriptor defining a
- 12 data packet to be communicated between a location in the memory and the second data
- 13 processing system,
- 14 a pointer descriptor identifying the location in the memory; and
- 15 storing the descriptors generated by the descriptor logic in a descriptor table for access by the first
- 16 and second data processing systems,
- 17 wherein said data processing systems employ Logical Communication Port architecture;
- 18 wherein said Logical Communication Port architecture comprises LCP Clients, an LCP Manager
- 19 resident in the kernel space, and at least one LCP Context resident in an adapter; and
- 20 wherein an LCP client can be located in one of user application space and the kernel.

1 11. (original) A method as claimed in claim 10, comprising storing the descriptor table in the first
2 data processing syste

3 12. (original) A method as claimed in claim 10, comprising storing the descriptor table in the
4 second data processing system.

5 13. (original) A method as claimed in claim 10, comprising, by the descriptor logic, generating a
6 branch descriptor comprising a link to another descriptor in the descriptor table.

7 14. (original) A method as claimed in claim 13, comprising linking a plurality of descriptor lists
8 together in series via branch descriptors to form the descriptor table.

9 15. (original) A method as claimed in claim 10, wherein the first data processing system comprises
10 a host computer system.

11 16. (original) A method as claimed of claim 10, wherein the second data processing system
12 comprises a data communications interface for communicating data between the host computer
13 system and a data communications network.

14 17. (previously presented) A computer program product comprising a computer readable medium
15 having computer readable program code means embodied therein for causing control of flow of
16 data between first and second data processing systems, the computer readable program code
17 means in said computer program product comprising code for causing a computer to effect the
18 functions of claim 1.

19 18. (currently amended)) A computer program product comprising a computer readable medium
20 having computer readable program code means embodied therein for causing data processing, the
21 computer readable program code means in said computer program product comprising code
22 ~~means~~ for causing a computer to effect the functions of a data processing system, the data
23 processing system comprising:

a host processing system having a memory, a data communications interface for communicating data between the host computer system and a data communications network, and

apparatus comprising:

descriptor logic, said apparatus for controlling flow of data between first and second data processing systems via a memory, said descriptor logic for generating a plurality of descriptors including a frame descriptor defining a data packet to be communicated between a location in the memory and the second data processing system, and

a pointer descriptor identifying the location in the memory; and

a descriptor table for storing the descriptors generated by the descriptor logic for access by the first and second data processing systems, for controlling flow of data between the memory of the host computer system and the data communications interface,

wherein said data processing systems employ Logical Communication Port architecture;

wherein said Logical Communication Port architecture comprises LCP Clients, an LCP Manager resident in the kernel space, and at least one LCP Context resident in an adapter; and

wherein an LCP client can be located in user application space or in the kernel.

19. (currently amended) An article of manufacture comprising a computer readable medium having computer readable program code means embodied therein for causing control of flow of data between first and second data processing systems, the computer readable program code means in said article of manufacture comprising code for causing a computer to effect the steps of a method controlling flow of data between first and second data processing systems via a memory, the step of controlling comprising:

- 1 by descriptor logic, generating a plurality of descriptors including a frame descriptor defining a
2 data packet to be communicated between a location in the memory and the second data
3 processing system,
- 4 a pointer descriptor identifying the location in the memory; and
- 5 storing the descriptors generated by the descriptor logic in a descriptor table for access by the first
6 and second data processing systems,
- 7 wherein said data processing systems employ Logical Communication Port architecture;
- 8 wherein said Logical Communication Port architecture comprises LCP Clients, an LCP Manager
9 resident in the kernel space, and at least one LCP Context resident in an adapter; and
- 10 wherein an LCP client can be located in one of user application space or in the kernel.
- 11 20. (currently amended) A program storage device readable by machine, tangibly embodying a
12 program of instructions executable by the machine to perform method steps for controlling flow
13 of data between first and second data processing systems, said method comprising controlling
14 flow of data between first and second data processing systems via a memory, the step of
15 controlling comprising:
- 16 by descriptor logic, generating a plurality of descriptors including a frame descriptor defining a
17 data packet to be communicated between a location in the memory and the second data
18 processing system,
- 19 a pointer descriptor identifying the location in the memory; and

1 storing the descriptors generated by the descriptor logic in a descriptor table for access by the first
2 and second data processing systems,

3 wherein said data processing systems employ Logical Communication Port architecture;

4 wherein said Logical Communication Port architecture comprises LCP Clients, an LCP Manager
5 resident in the kernel space, and at least one LCP Context resident in an adapter; and

6 wherein an LCP client can be located in user application space or in the kernel.

7 21. (currently amended) An apparatus as claimed in claim 1, wherein:

8 ~~said apparatus employs Logical Communication Port architecture, and the descriptor table is~~
9 ~~stored in one of the first data processing system and the second data processing system;~~

10 the descriptor table is stored in the second data processing system;

11 ~~said apparatus employs Logical Communication Port architecture, and the descriptor logic~~
12 ~~generates a branch descriptor comprising a link to another descriptor in the descriptor table;~~

13 the descriptor table comprises a plurality of descriptor lists sequentially linked together via branch
14 descriptors therein; and

15 the descriptor table comprises a cyclic descriptor list.